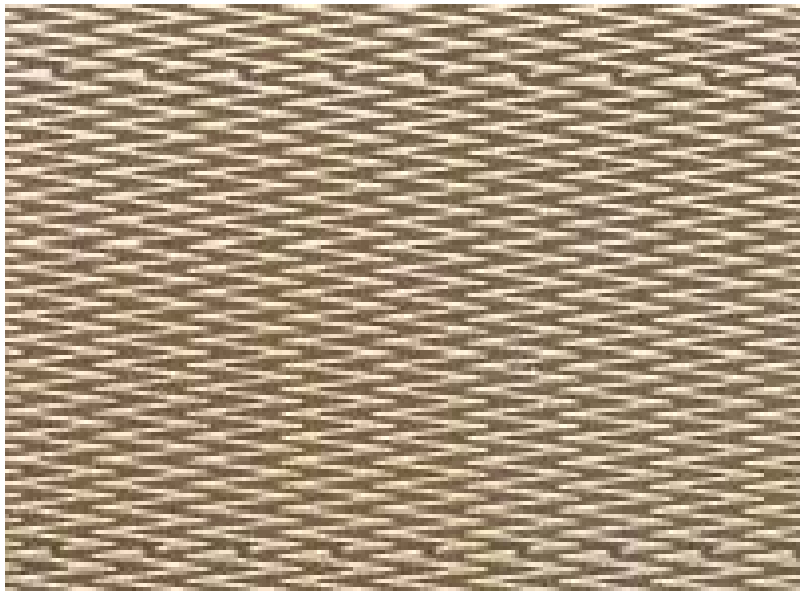
Chevron
Error Correction Update:
Full Pad -> Half Pad &
Beam Test Correction -> In-lab Data

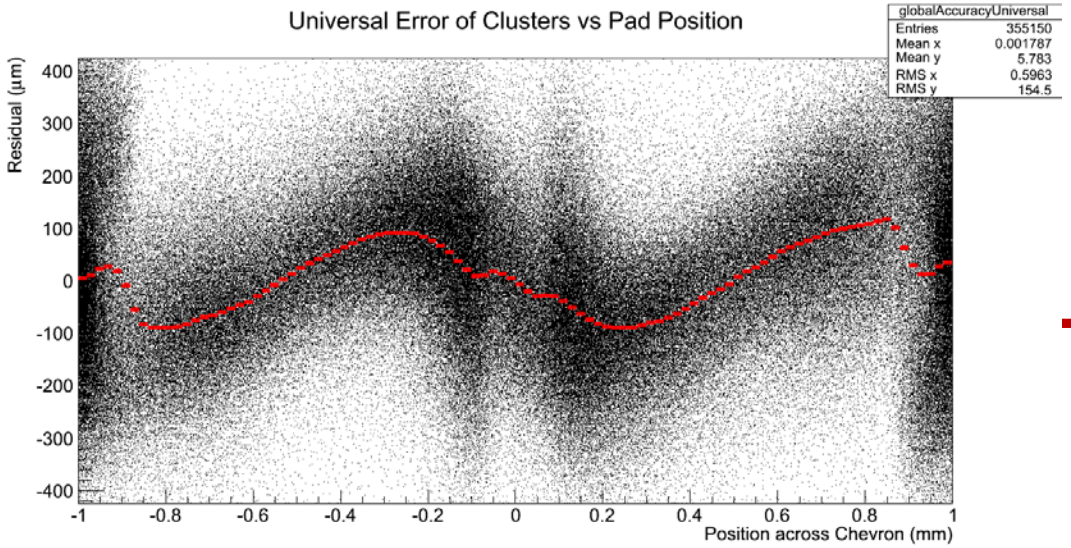


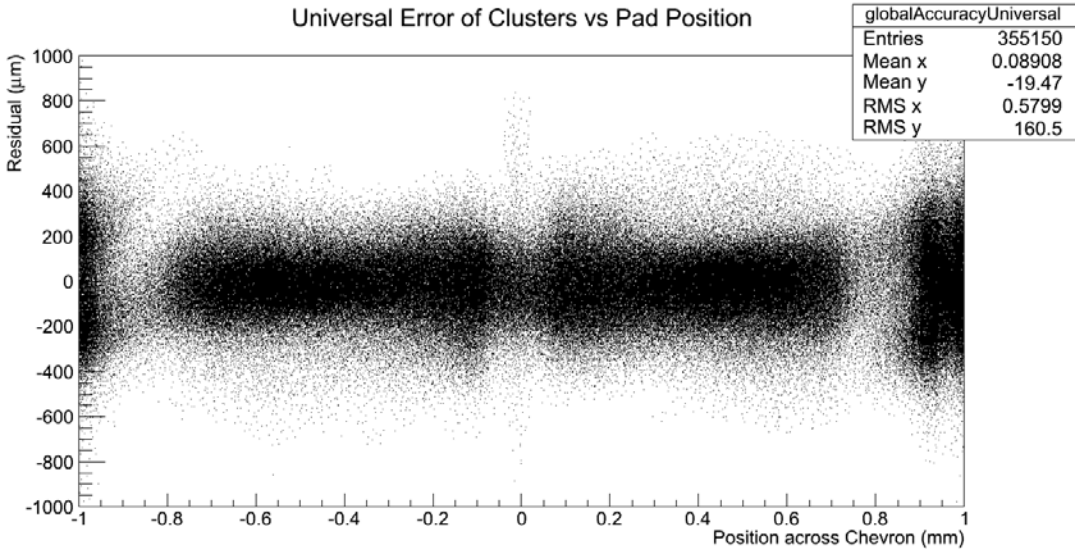
Michael Phipps, Bob Azmoun, Craig Woody

Pre Correction: Multipad Events

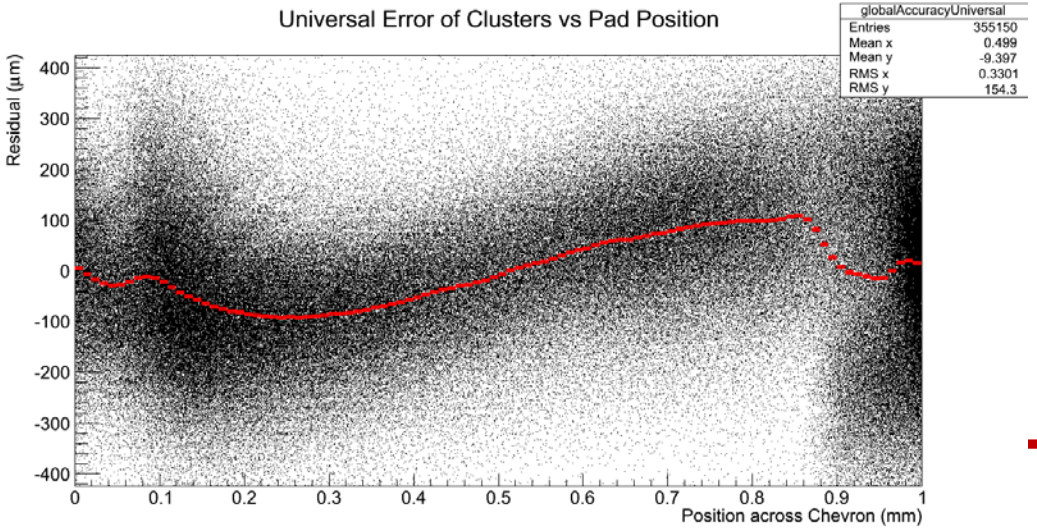
Post Correction: Multipad Events

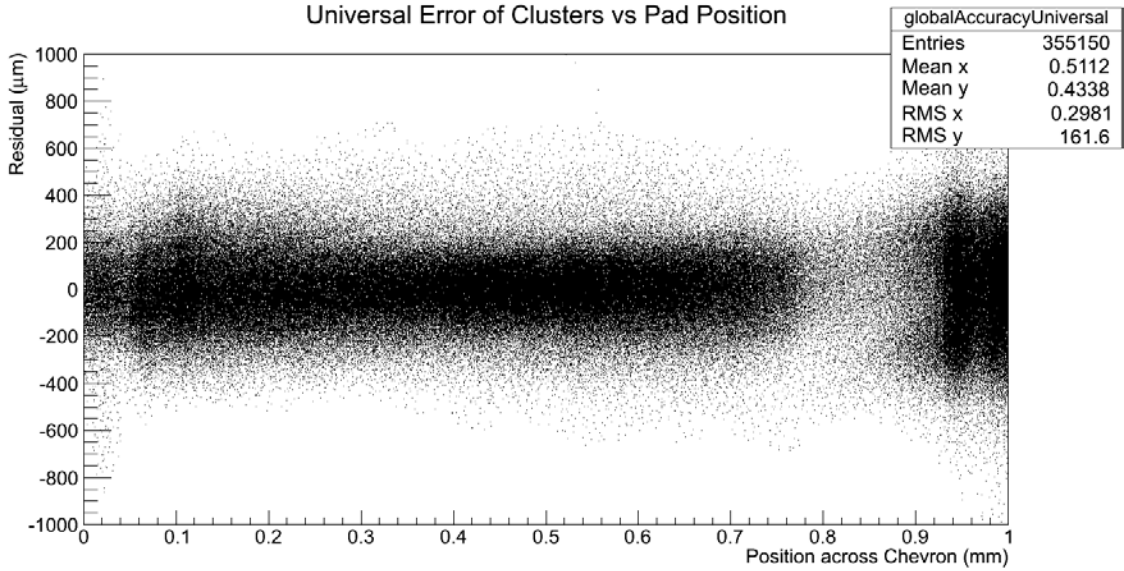
Full Pad Error Distribution





Half Pad Error Distribution

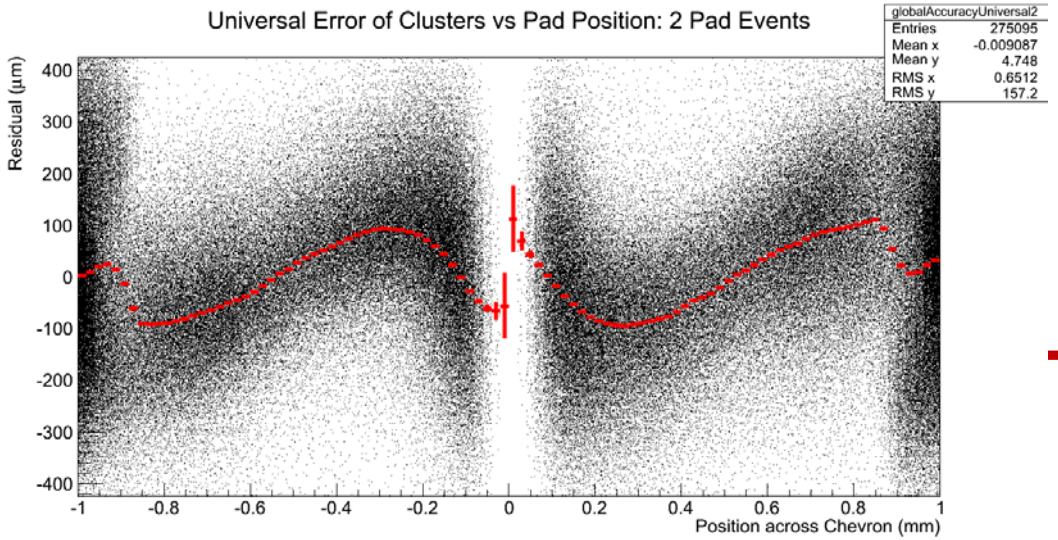


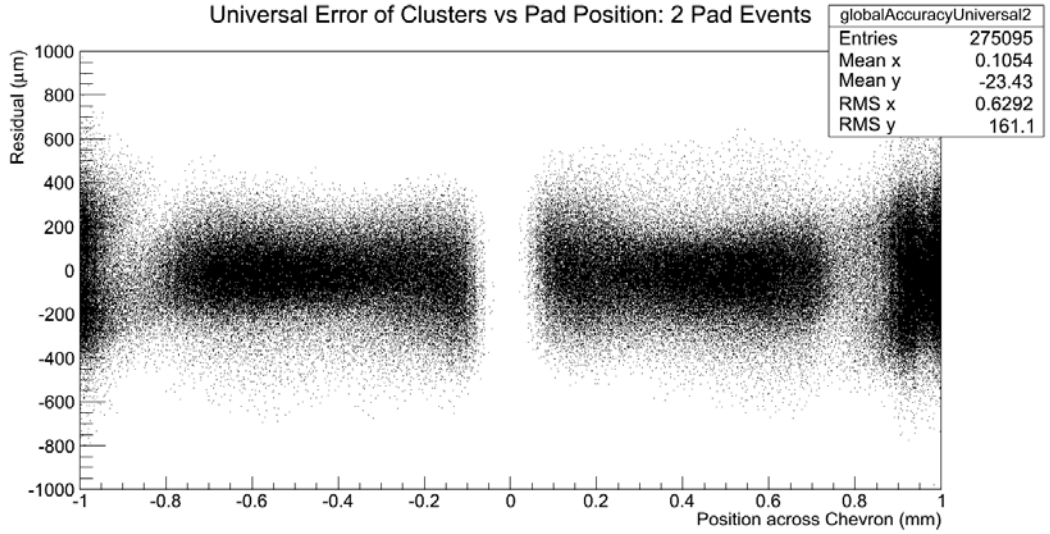


Pre Correction: 2 Pad Events

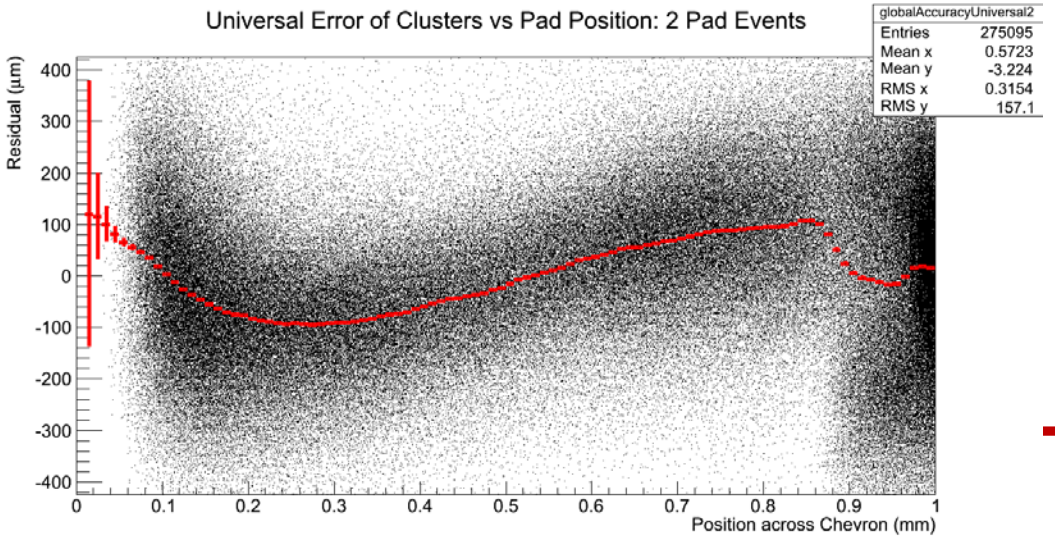
Post Correction: 2 Pad Events

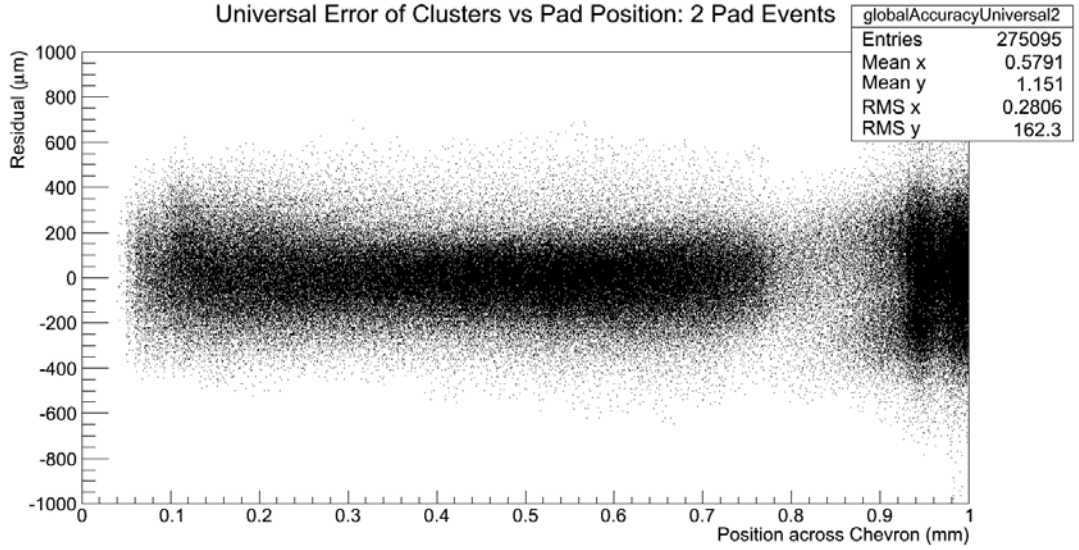
Full Pad Error Distribution





Half Pad Error Distribution

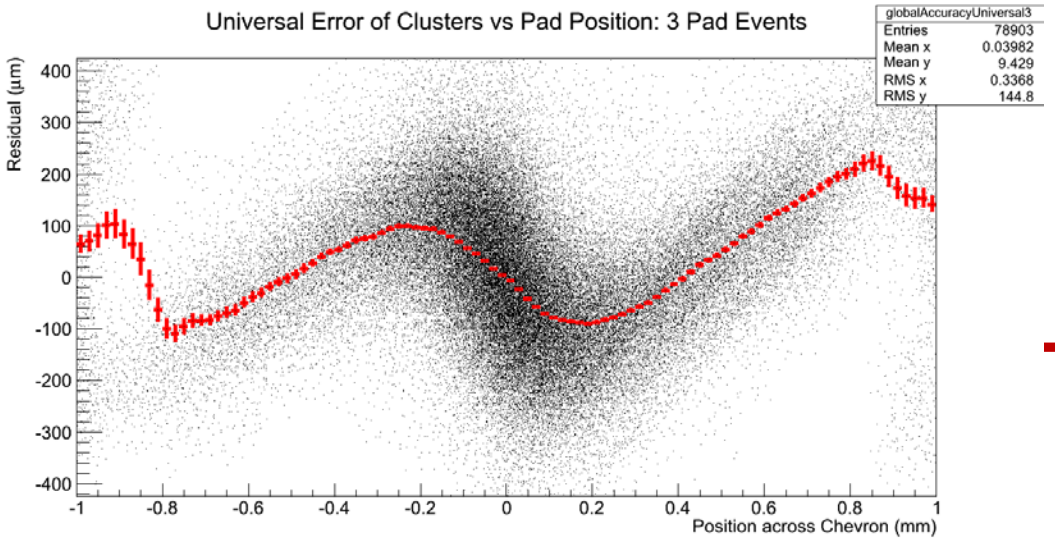


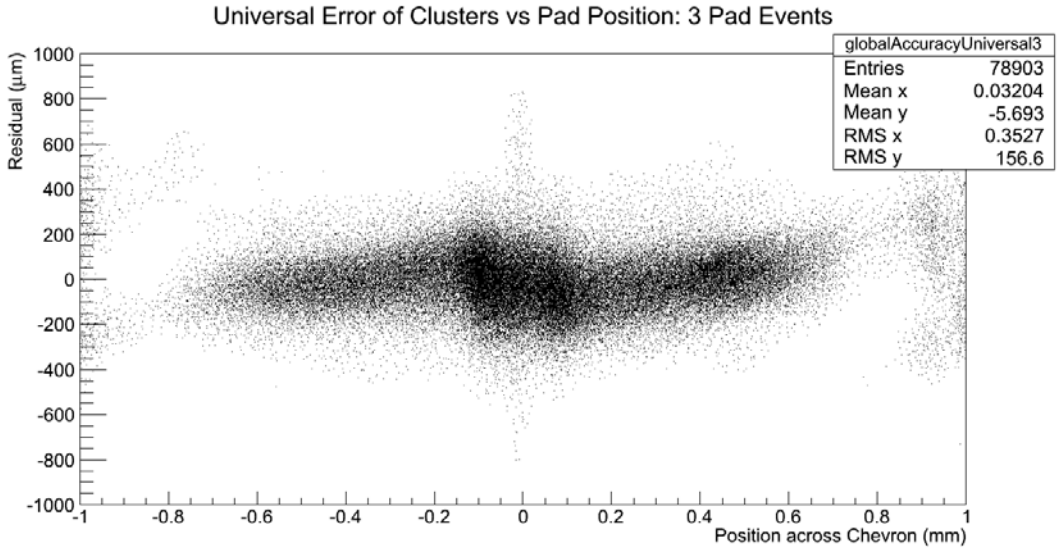


Pre Correction: 3 Pad Events

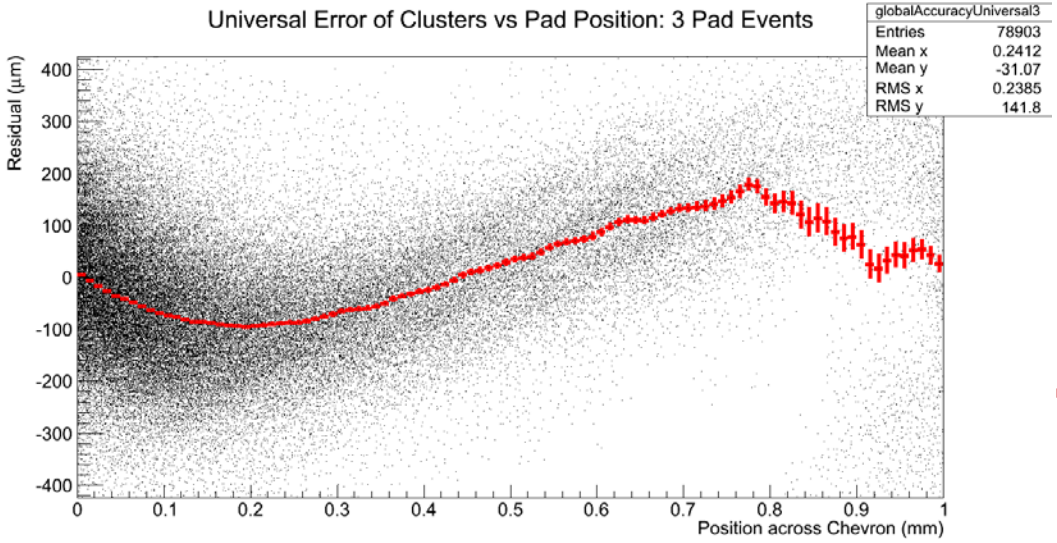
Post Correction: 3 Pad Events

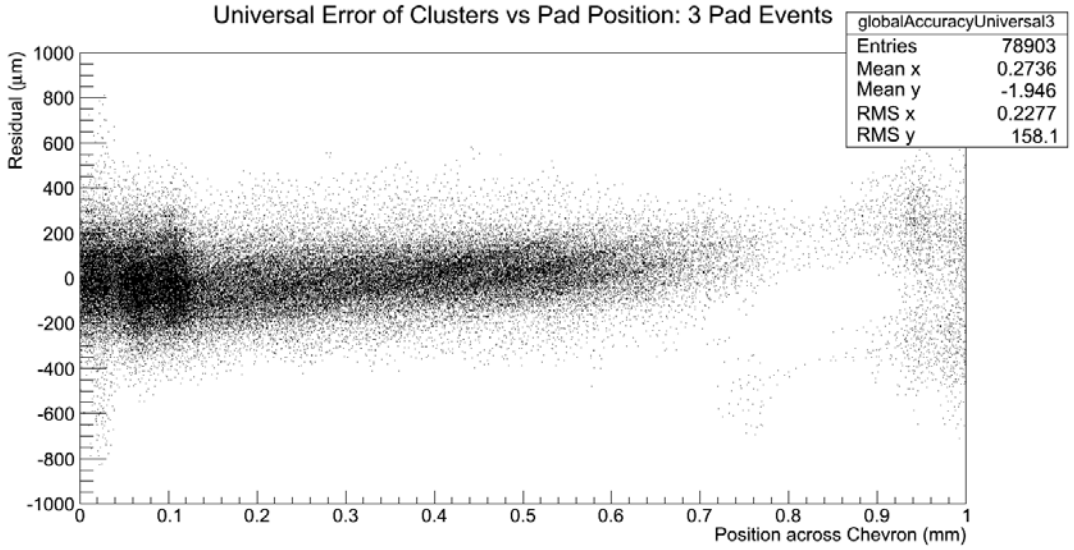
Full Pad Error Distribution





Half Pad Error Distribution

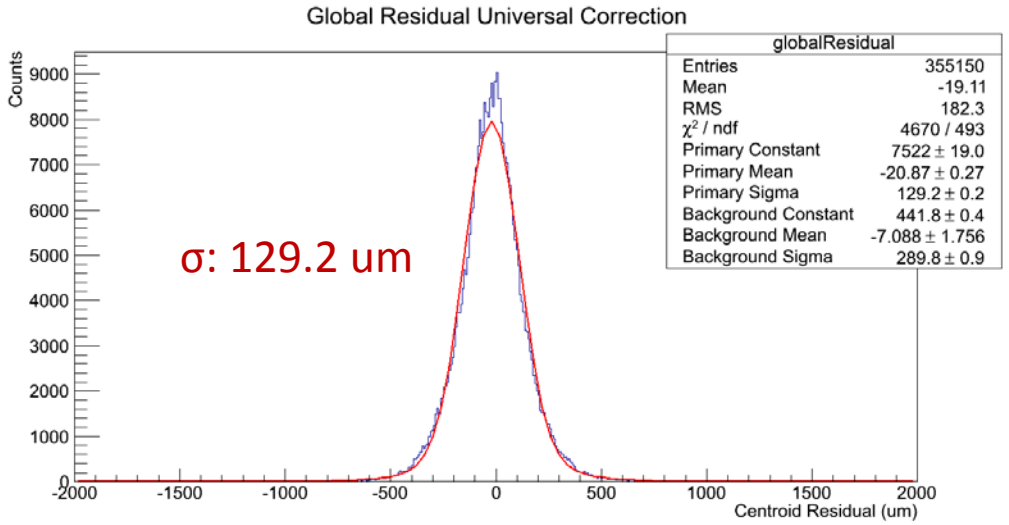


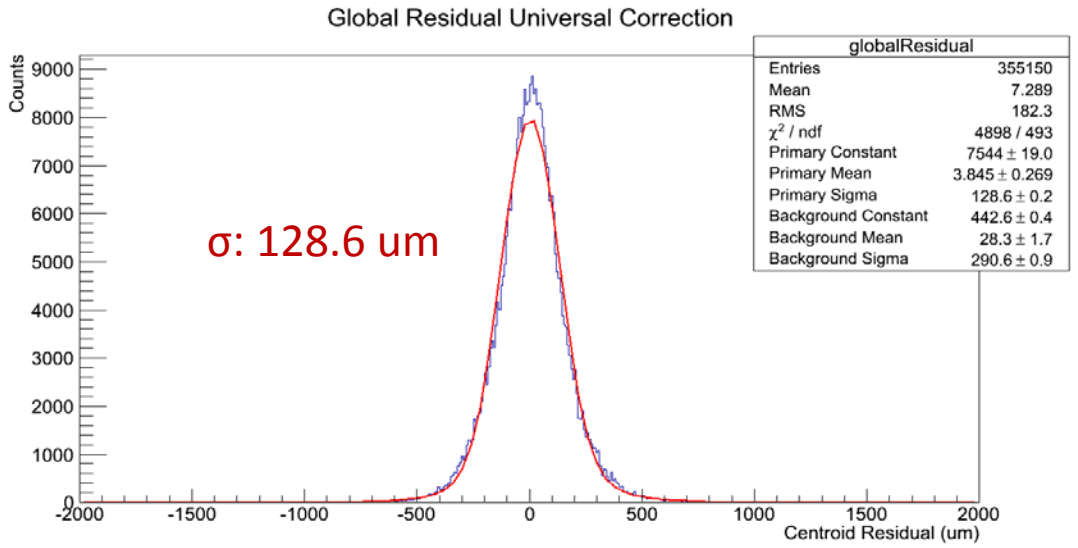


Full Pad Residual Distribution (Smooth)

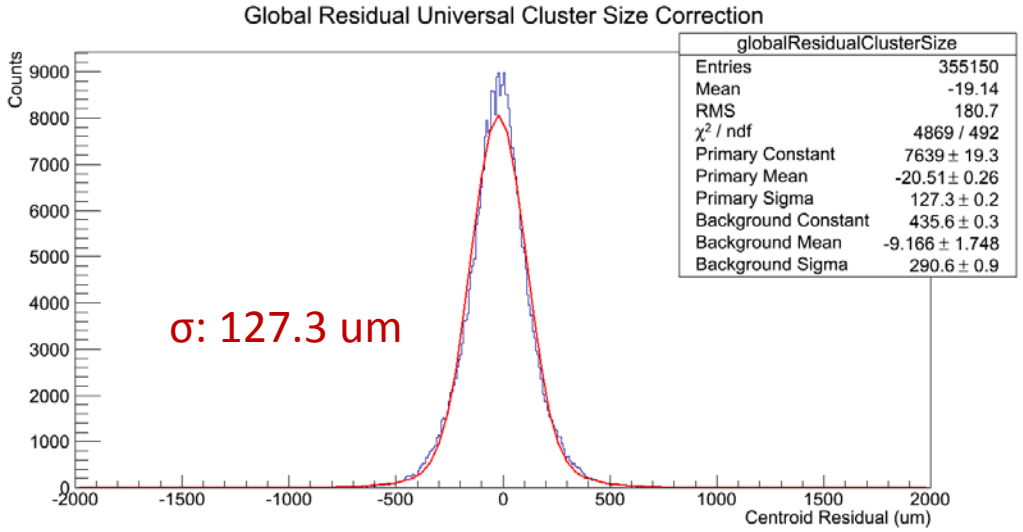
Half Pad Residual Distribution (Smooth)

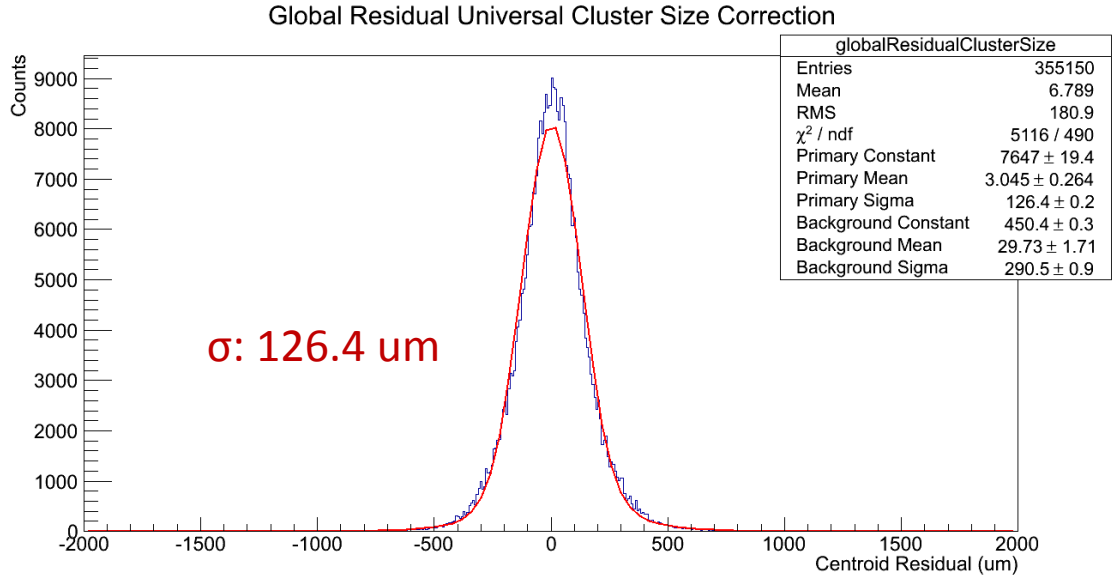
Multi-Pad Universal Correction





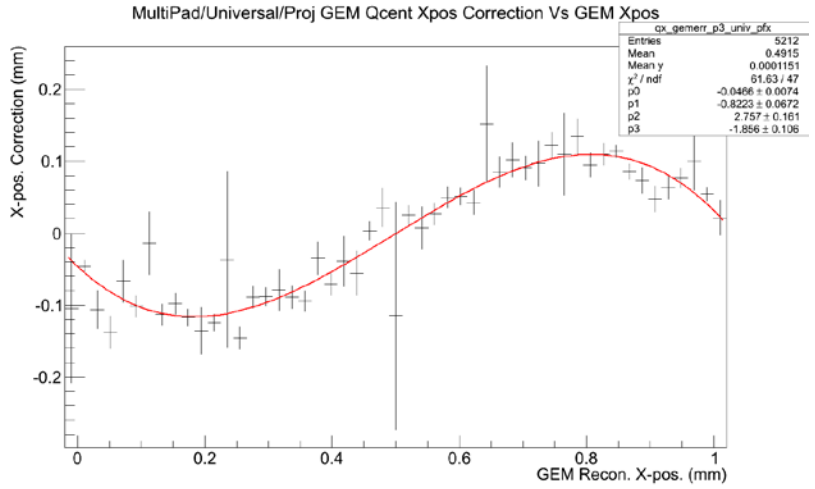
Cluster Size Universal Correction



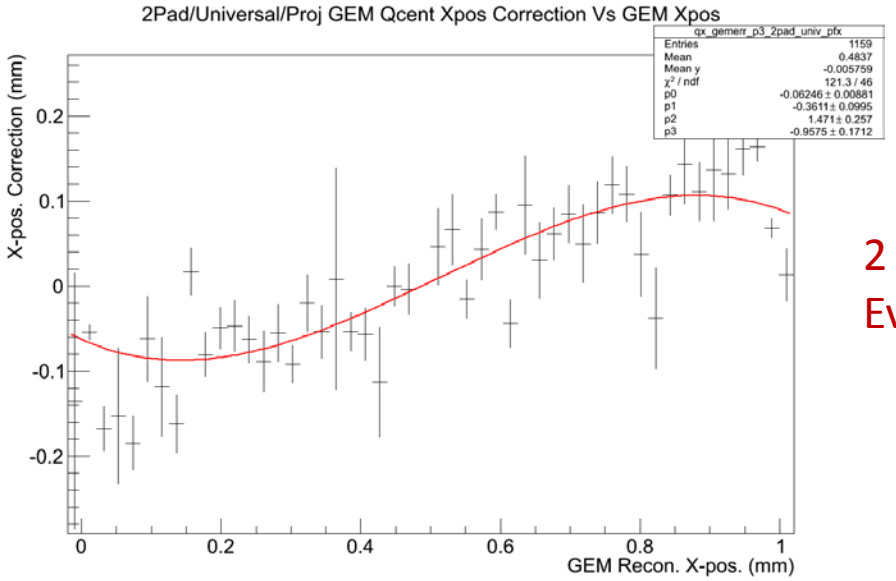


Error Functions Generated Using Beam Test Data

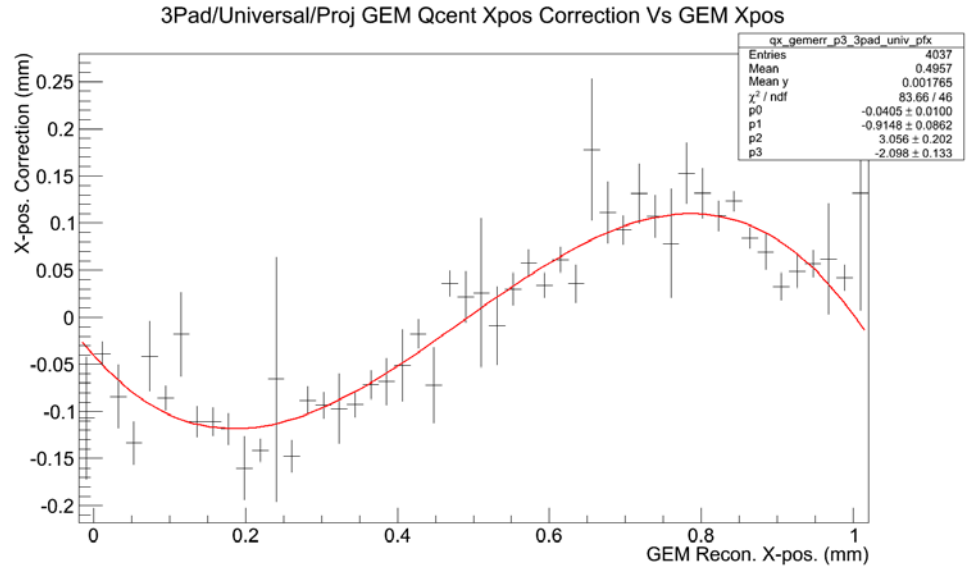
Multi-Pad Events



2 Pad Events



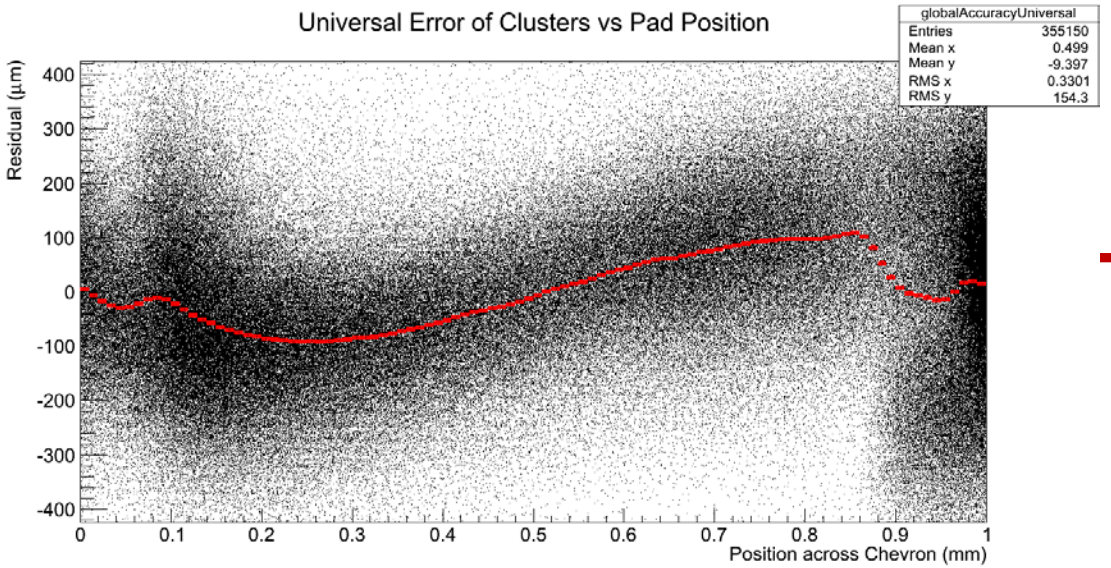
3 Pad Events

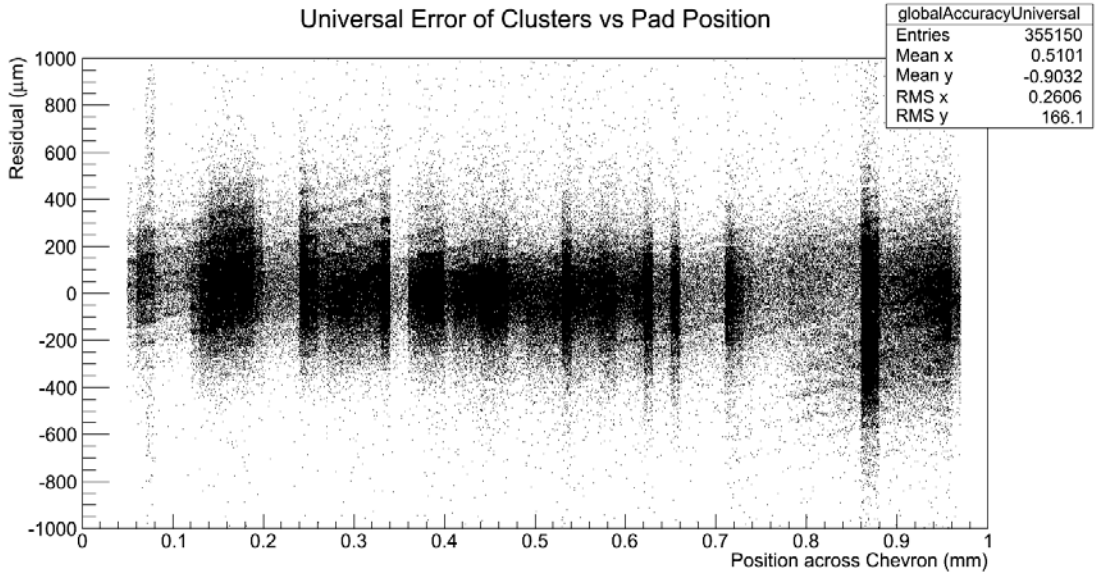


Pre Correction Scatter Plot

Post Correction Scatter Plot:
Beam Test Generated Correction

Multi-pad Events

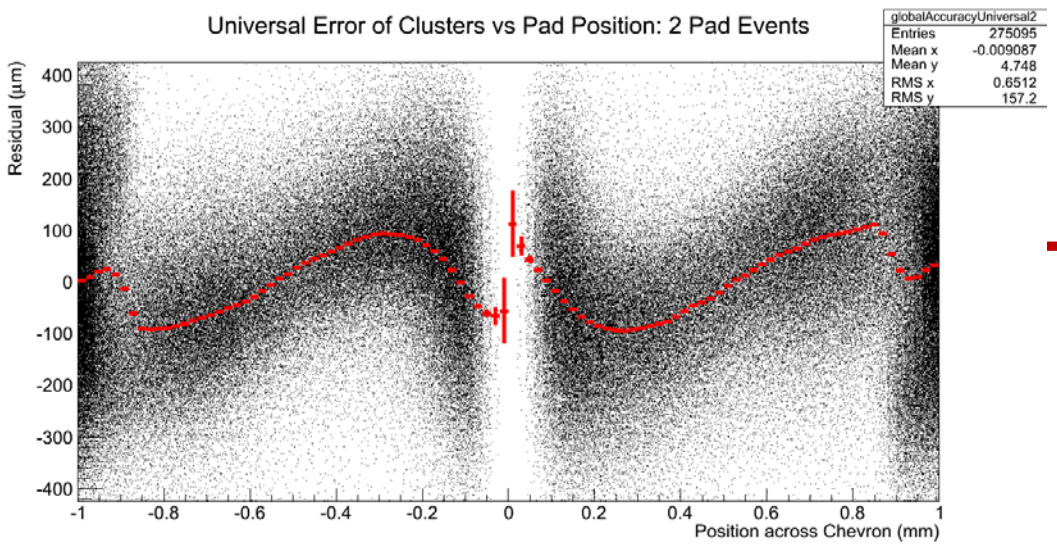


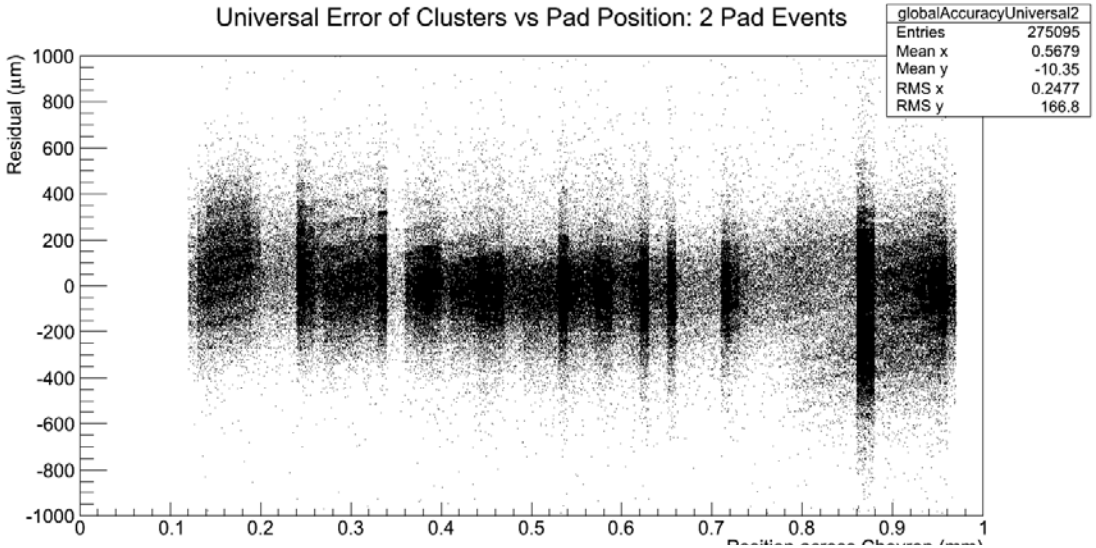


Pre Correction Scatter Plot

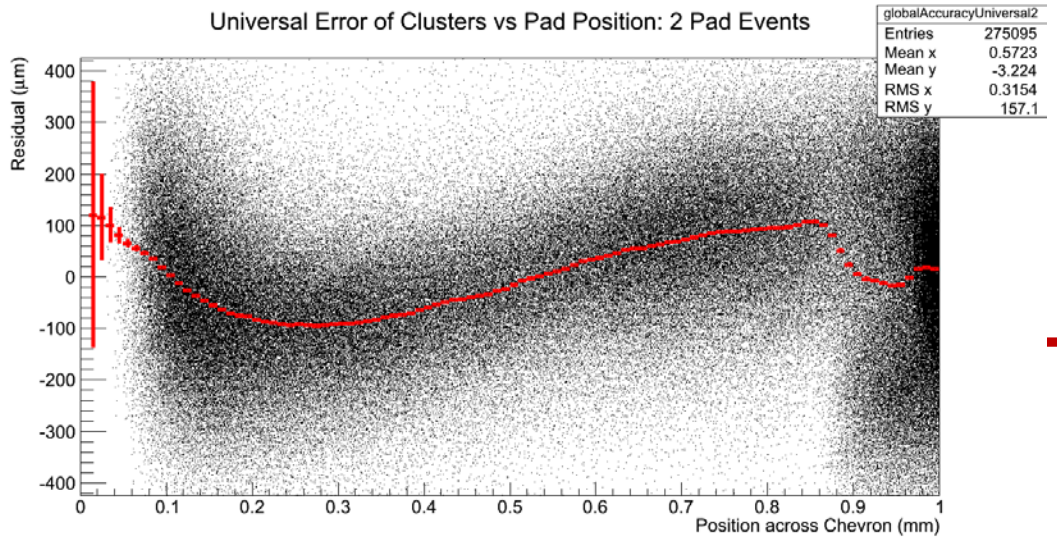
Post Correction Scatter Plot:
Beam Test Generated Correction

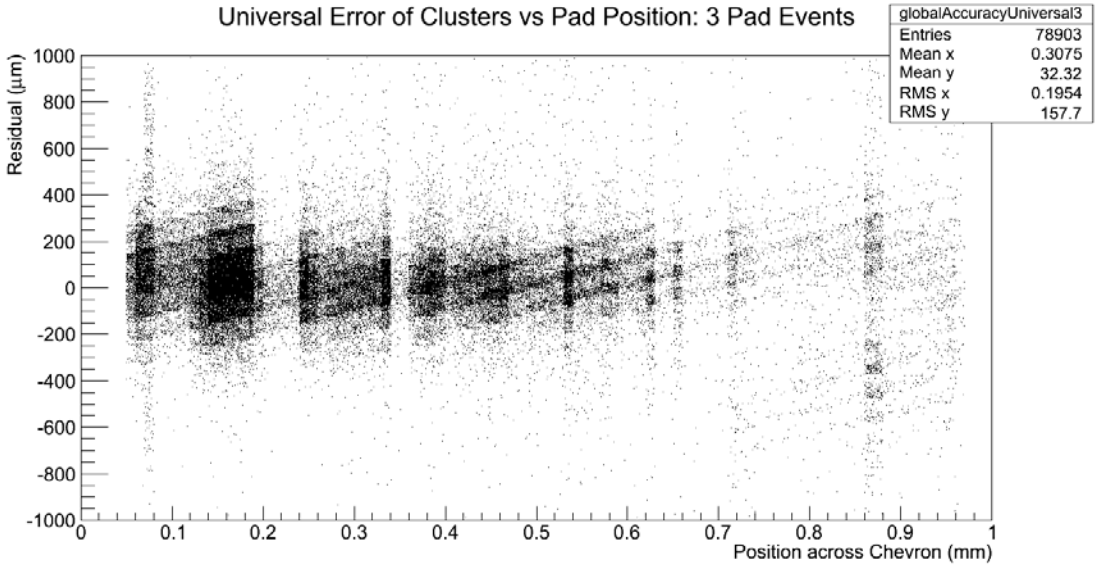
2 Pad Events



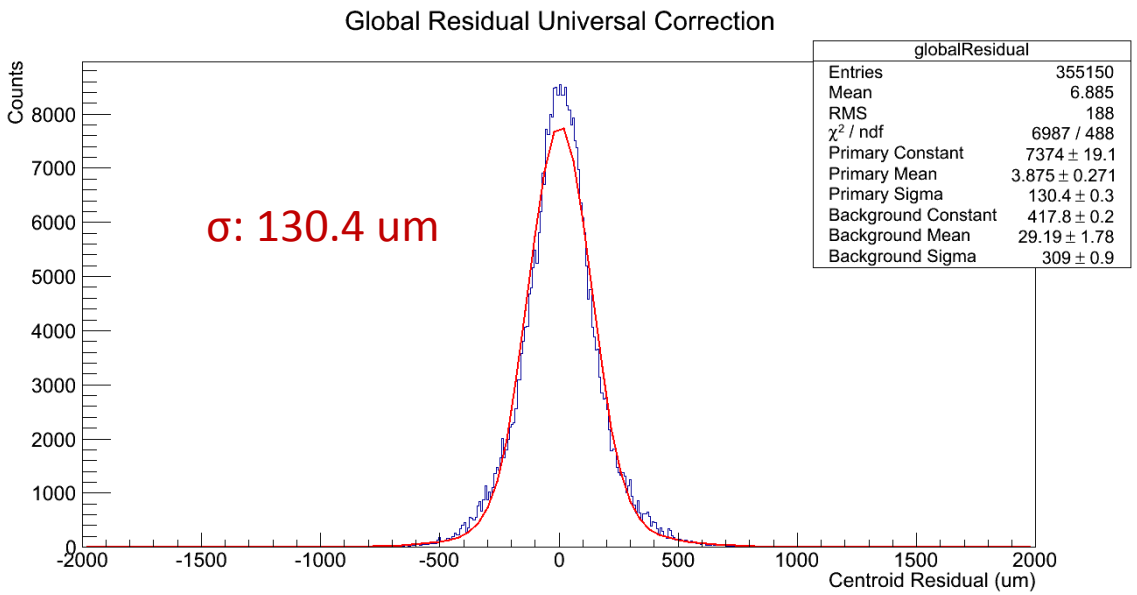


3 Pad Events

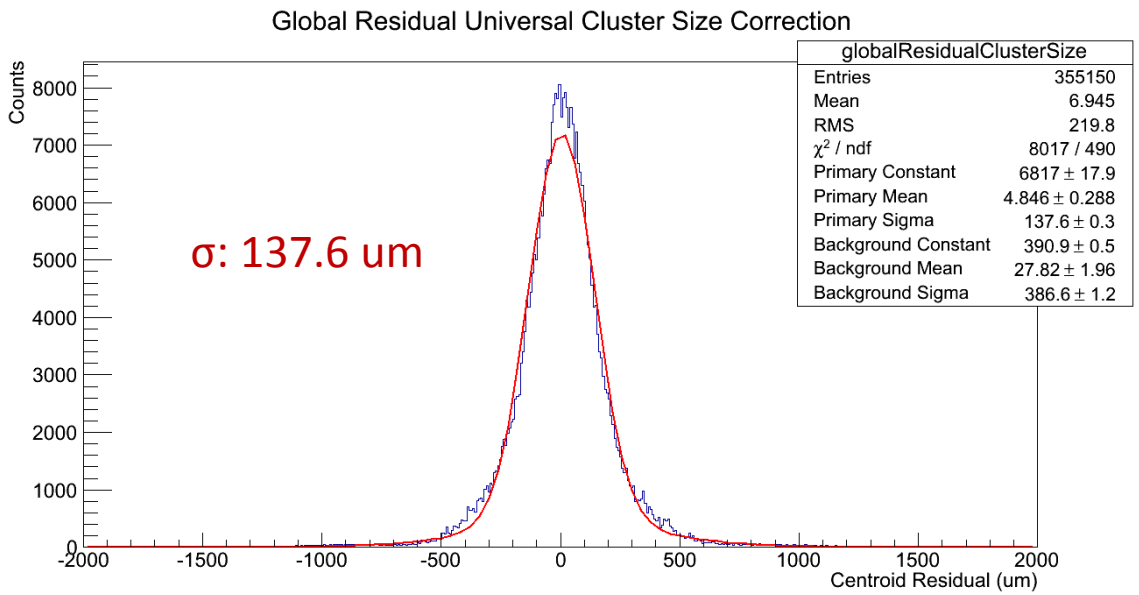




Multi Pad Universal:
Using Beam Test Error Function



Cluster Size Universal:
Using Beam Test Error Function



Conclusions

- No resolution loss in switching to half pad error functions (and because of pad symmetry, with high stats there shouldn’t be)
- Allows 2x as many stats for your error function
- Universal error function appears to be “universal”. Worked on same board under different testing conditions (Beam test Oct 2013; In-lab x-ray scan Summer 2014)
- Expect even better performance in using in-lab correction on beam test data